

REMARKS/ARGUMENTS

Claims 1-4, 6, 8, 10, 18 and 19 are pending, with Claim 1 being independent. Claims 7, 11-17 and 20 have been withdrawn. Applicants reserve the right to pursue the non-elected claims in a divisional application prior to issuance of a patent on the instant application. Claims 5 and 9 have been canceled and their subject matter have been incorporated in amended Claim 1. Reconsideration and withdrawal of the following rejections are respectfully requested in view of the claim modifications made herein and in light of the following remarks.

In the Office Action dated February 8, 2005, Claim 19 was rejected under 35 U.S.C. §112, second paragraph. Claim 19 has been appropriately amended to overcome this rejection. Withdrawal of the 35 U.S.C. §112, second paragraph is respectfully requested.

A salient feature of the piston and cylinder unit recited in amended claim 1 is that a preloaded valve piston (19, 19') of one of first and second valves (14, 14') has a closing element (16, 16'), which blocks a mouth (12, 12') between a working space (3,4) and a valve chamber (14, 14') when a closing force, acting upon the valve piston in the valve chamber, exceeds an opening force associated with pressure in the working space and acting upon the closing element. Once pressure in the working space rises so that the opening force is capable of overcoming the closing force, the piston valve/closing element moves away from the mouth. As a result, flow communication between the working space and a pressure equalizing space (20) is established for proper functionality of the entire piston and cylinder unit.

A magnitude of opening force F is proportional to an area across which this force acts ($F=PA$, where A is surface area, and P is pressure). During opening, the opening force acts upon a small area of the closing element and is relatively insignificant. However, once the mouth is

open, the opening force acts across a larger area of the piston valve and biases the piston valve/closing element unit away from the mouth even if pressure in the working space drops.

This is important because during upward and downward strokes of a piston rod (5) pressure in the working space, which is in flow communication with the valve chamber, varies. However, because the relatively large area of the piston valve contributes to a substantial opening force, the piston valve/closing element combination is not sensitive to small pressure variations and remains spaced from the mouth.

Claims 1 through 5 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 3,625,321 (Lutz). It is respectfully submitted that Lutz does not disclose such a valve piston and closing element as recited by amended Claim 1. Hence, Claim 1 and dependent Claims 2-5 are not anticipated by Lutz. Thus, the 35 U.S.C. §102(b) rejection of Claims 1-5 is respectfully requested to be withdrawn.

Claims 6, 9 and 10 stand rejected under 35 U.S.C. §103(a) as unpatentable over Lutz.

Lutz does not disclose a structure for first and second valves as recited in Claim 9. Lutz is silent about a valve piston and a closing element, as recited in Claim 1. Lutz teaches flaps (7) closing throttles which extend between a pressure-equalizing space and respective working spaces.

This is a completely different structure as compared to the structure recited in Claim 1. The flaps do not comprise a valve piston, as recited in Claim 1. The flaps are inherently sensitive to varying pressure and may block flow between adjacent chambers in response to an insignificant pressure drop in the working space, which is undesirable.

Lutz has no suggestion as to modifying the flaps as discussed above. Accordingly, Lutz does not render the structure as recited in dependent Claims 6 and 10 unpatentable. Thus, Claims 6 and 10 are patentable over Lutz.

Withdrawal of the 35 U.S.C. §103(a) rejection of Claims 6 and 10 is respectfully requested.

Claim 8 stands rejected under 35 U.S.C. §103(a) as unpatentable over Lutz in view of U.S. Patent No. 3,469,661 (Hoffman).

Hoffman discloses a one-way valve 14 which is axially juxtaposed with a narrow extension of piston rod and is configured to allow fluid to flow from a pressure equalizing space into a working space (15).

Firstly, a direction of flow in Lutz is opposite - from the working space into the pressure equalizing space. Hence, Lutz teaches away from the suggested combination. Secondly, Hoffman does not suggest a piston valve/closing element unit as recited in Claim 1.

Accordingly, Hoffman cannot remedy the deficiencies of Lutz. As a result, Claims 8, which depends from Claim 1, is patentable over Lutz in view of Hoffman, and withdrawal of the 35 U.S.C. §103(a) rejection is respectfully requested.

Claims 18 and 19 stand rejected under 35 U.S.C. §103(a) as unpatentable over Lutz in view of U.S. Patent No. 5,224,413 (Herner). Herner does not suggest a valve piston and a closing element, as recited in amended Claim 1, and thus cannot remedy the deficiency of Lutz. Accordingly, Claims 18 and 19 depending from Claim 1 are patentable over Lutz in view of Herner, and withdrawal of the 35 U.S.C. rejection is respectfully requested.

Based on the above, it is respectfully submitted that the present application is now in

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condition for allowance. Prompt and favorable action to this effect is respectfully solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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